Storyboarding and Programming w/ Alice and The Sims™

Summary

This project will give you the chance to create a storyboard, translate your storyboard into a programmable script, and create a 3D animation using an easy to learn programming language.

Preparation

1. Be sure that you have installed Alice 3 on the computers to be used. You can follow directions here:
   http://alice3.pbworks.com/w/page/57581183/Download%20And%20Install
2. You will want to first make sure that Alice can be opened and runs before the event
3. Print out blank storyboard papers and insure you have pencils for all the participants
4. Check that you can access the accompanying youtube videos or download the videos for use
5. If you are going to project the accompanying presentation, Alice, or the videos for the lesson be sure you have a computer that is set up to project and the computers can play the relevant files (ppt, mp4 videos, Alice program)

Agenda

Activity Introduction (5min)

For this section you can use the ppt presentation to walk through the introduction and lesson, or just just play the videos and give your own introduction following the basic points, or whatever combination works best for you.

1. Show a Welcome Video from the hour of code site to get them excited:
   a. https://hourofcode.com/us/promote/resources
2. Introduce the Activity

a. Today you will be designing and programming a short animation using the storyboarding process. The subject of the animation will be a short conversation between characters.
b. First you will build a 3D scene from Alice's gallery. This will determine where your story takes place and who the main characters are.
c. You will then draw a storyboard as a visual plan for your animation.
d. Translating your storyboard into a programming script will help you create a blueprint for what you will be coding in Alice
e. Finally you will use Alice a 3D visual programming language to program your animation.
f. You will want to have Alice 3 open as well as navigate to the Alice 3 hour of code webpage to follow along the steps and access the supporting videos

Activity

For this portion of the event you will guide the students through the following stages. You can have them follow along on the web page or you can project the ppt or both. The ppt has slides that can be left up for each activity stage to prompt them with ideas or to give them tips and tricks for each stage. The videos can be found on the Alice youtube channel, on the dedicated webpage, or can be downloaded from the dedicated web page and shared.

Scene Setup (10min)

The first step is to decide where your story takes place and who are the main characters. Since you will be using Alice to create your animation you will be constrained by what characters and props you can find in the Alice gallery. Explore the alice gallery to see what you would like to use - don't forget about the Sims people builder. Save your worlds often.

You can show or provide the video "How to use the scene editor"

Walk around and make sure they are having success building a scene. Prompt them to keep it simple in the beginning to insure you can move on to the next stage. Make sure they save their words often.

You can find additional How to Videos for the Alice 3 Scene Editor Here:

https://www.youtube.com/playlist?list=PL2vYlw8bSEXTyNRMhysZj5gz6hR9I8xbT

Make a storyboard (10min)

Draw a storyboard to plan your animation. Focus on a simple dialogue for the first iteration to insure a successful completion. You can revisit and add more complex interactions later if time permits. If you want to plan for more complex animations add in the following:

- Simple movement of characters entering or leaving the scene
- Simple character animations such as pointing or shaking their head
- Camera changes such as moving from a wide shot to a close up of a character

Some Story ideas:

- Jokes
- Ecards
- Song lyrics
- Internet Memes

Distribute blank storyboards and pens and pencils
- Share example storyboards
- Share story Ideas
- Stress that storyboards can be simple stick figure drawings

Walk around and make sure they are having success coming up with an idea and have a basic storyboard created. Prompt them to keep it simple in the beginning to insure you can move on to the next stage.

Design your program and add comments to Alice for what will happen (5min)

Write a script for your program from the storyboard - Focus on describing the order things happen in and highlight the actor and actions. This will serve as a guide for what your code will look like.

Walk around and make sure they are having success creating their script.

Use procedures to animate your story (20min)

Create your animation by adding procedures in the code editor. Save your worlds often.

You can show or provide the video "How use the code editor"

Have them start by successfully adding in all of the thought or speech bubbles. Once they have accomplished that you can either walk them through or direct them to the more advanced how to videos and materials for creating more complex animations.

You can find additional How to Videos for the Alice 3 Code Editor Here:

https://www.youtube.com/playlist?list=PL2vYlw8bSEXRn0UHXd1-jXVOSpP9zuxYT

Add-Ons (optional)

These are optional how to materials for student who progress quickly through the other steps and want to add more dynamic interactions to their animation or if you chose to extend the experience to a longer project.

You can find supporting how to content embedded and available for download on the dedicated Alice 3 Hour of Code webpage or on youtube in an Alice 3 Hour of Code Activity playlist here:

https://www.youtube.com/channel/UCtC1NJ-tJnTxcH5cmaKEr2g

Option 1 Add Character Moves

Explore the other procedures including the move command to have your characters move around the scene. This can be used to have a character move into or out of the scene.

View the video on how to use move procedures

Option 2 Animate Characters

Explore animating joints of characters to have your characters pose in different ways or even animate movements. This can be used to have the characters mouth move, head shake, arms wave or other simple gestures.

View the video on how to manipulate subjoints

Option 3 Camera Changes

Use camera moves and changes to make your story more dynamic or set up multiple scenes. You can explore using character close-ups, camera pans, or even zoom effects.

View the video on how to animate the camera

Option 4 Do Together

Use the do together controller to have multiple things happen at the same time. You can explore using this to have the mouth move while they bubbles appear, have camera moves happen while things are moving and much more.

View the video on how to implement a do together

Wrap Up - Sharing and Discussion (10min)

Have the students save their worlds onto a thumb drive and project and present them to the class or have the class move from computer to computer to share their worlds. If time is limited have them share their world with another student First have the student show the storyboard and talk about their idea then have them play their world.

As a class discuss the experience

Discussion Question Ideas:

-   What did you like about the activity?
-   What were some of the challenges of this project?